USAWC STRATEGY RESEARCH PROJECT

21st CENTURY WARFIGHTER SUPPORT: OPTIMIZING SEABASING THROUGH THE TRANSFORMATIONAL POSSIBILTIES OF REACHBACK

by

Lieutenant Colonel Jeffery M. Peterson
United States Marine Corps

Colonel Patrick K. Halton
Project Advisor

U.S. Army War College
CARLISLE BARRACKS, PENNSYLVANIA 17013

REPORT DOCUMENTATION PAGE

Form Approved OMB No. 0704-0188

1. REPORT DATE (DD-MM-YYYY)	2. REPORT TYPE	3. DATES COVERED (FROM - TO)
07-04-2003		xx-xx-2002 to xx-xx-2003

4. TITLE AND SUBTITLE
21st Century Warfighter Support
Optimizing Saebasing Through the Transformational Possibilities of Reachback
Unclassified

5a. CONTRACT NUMBER
5b. GRANT NUMBER
5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S)
Peterson, Jeffery M. ; Author

5d. PROJECT NUMBER
5e. TASK NUMBER
5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME AND ADDRESS
U.S. Army War College
Carlisle Barracks
Carlisle, PA17013-5050

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING/MONITORING AGENCY NAME AND ADDRESS
,

10. SPONSOR/MONITOR'S ACRONYM(S)
11. SPONSOR/MONITOR'S REPORT NUMBER(S)

12. DISTRIBUTION/AVAILABILITY STATEMENT
APUBLIC RELEASE
,

13. SUPPLEMENTARY NOTES

14. ABSTRACT
See attached file.

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE	Same as Report (SAR)	43	Rife, Dave RifeD@awc.carlisle.army.mil
Unclassified	Unclassified	Unclassified			19b. TELEPHONE NUMBER International Area Code Area Code Telephone Number DSN

ABSTRACT

AUTHOR: Lieutenant Colonel Jeffery M. Peterson

TITLE: 21st Century Warfighter Support: Optimizing Seabasing Through the Transformational Possibilities of Reachback

FORMAT: Strategy Research Project

DATE: 01 December 2002 PAGES: 43 CLASSIFICATION: Unclassified

The Navy and Marine Corps continue their cooperative efforts to fully develop the transformational concept of Naval Expeditionary Maneuver Warfare (NEMW). The crafters of the NEMW concept recognize that the traditional doctrine of bringing supplies and support activities to the beach must give way to seabasing. Seabasing facilitates the seamless transition of naval forces from water to land such that a beachhead is no longer considered a vital intermediate objective. The author asserts that seabasing should be complemented, where appropriate, with reachback capabilities. Reachback occurs when warfighters in a distant theater access the capabilities of remotely-located people and informational resources through their C2 systems or when commanders leave certain physical assets and capabilities at a home base and then rush them to the theater when needed. The author explores the strategic implications of reachback as well as reachback applications used to date. The author also discusses admonitions that must be considered and acted upon as reachback development continues. The author concludes that reachback should be adopted as an important complement to seabasing within the overall framework of NEMW and argues that Navy and Marine Corps concept documents should highlight this important complementary relationship.

TABLE OF CONTENTS

ACKNOWLEDGEMENT

Thanks, Tony and Jim … you both helped spur my interest in the whole area of reachback and played a big role in my thought formulation during our year together in MPX.

21ST CENTURY WARFIGHTER SUPPORT: OPTIMIZING SEABASING THROUGH THE TRANSFORMATIONAL POSSIBILITIES OF REACHBACK

Marines and Sailors have long wrestled with the challenges of drag and friction … those all-important gravitational forces within nature that work as constants against our endeavors to project increasing levels of naval power faster and farther. Images of legendary naval battles in the Pacific often portray a struggle against gravity that was every bit as daunting as the struggle against the enemy. Additionally, while the ocean served as a strategic asset for the movement of large numbers of troops and supplies, it also served as an obstacle for those who must cross it en route to a beachhead where a determined enemy would defend from a position of strength. The slow movement of Marines and supplies across the water from amphibious ships just off the beach was invariably followed by that vital pause at a beachhead … a critical intermediate objective needed to transition to other forms of movement, to store supplies and support capabilities, and to afford the Marines the opportunity to maneuver and pay their dues against an enemy defending the coastline. Those scenes of great struggle have given way to less strained scenes that have been enabled by the technological advances of faster and more powerful beach craft and aircraft. These enhanced capabilities have increasingly enabled warfighters to defy the constant grip of drag and friction while turning sea space into a valuable maneuver area vice an obstacle wrought with certain peril. The result has been that warfighters can now project naval power faster and farther than their amphibious ancestors might have ever dreamed possible.

Operational concepts for projecting naval power have long been constrained by the forces of nature and the facts of geography and the limits of man's ability to overcome them with technology. As such, these concepts have matured at an increasing but largely evolutionary pace. In recent years, however, rapid advances in technology have opened the warfighters' eyes to a whole new set of possibilities for projecting naval power throughout the littoral regions of the world … possibilities that are redefining operational concepts. Today, the Navy and Marine Corps team has built a vision for the future that is encapsulated in their capstone concept of Naval Expeditionary Maneuver Warfare (NEMW). While there are various integrating, operational, and functional concepts and core competencies that comprise NEMW, three are particularly critical to attaining a basic understanding of the direction the Navy and Marine Corps are headed.

The first of these underlying concepts is Operational Maneuver from the Sea (OMFTS). OMFTS is the operational concept that moves warfighters beyond viewing sea space as an obstacle and a liability at the operational and tactical level of war to viewing it as an asset. With

OMFTS, sea space is viewed as valuable maneuver area that gives warfighters tremendous flexibility as they transition from sea to land. Aided by good intelligence, the maneuver commander uses the sea space to his advantage by flexibly maneuvering from sea to land while avoiding the enemy's strength. OMFTS, focused as it is on the tactical and operational levels of war, and supported by present and emerging technologies, allows warfighters to minimize the telegraphing of their intentions by allowing the ships to remain far at sea, well over the horizon. This is in sharp contrast to the pictures of World War II in which amphibious ships were positioned a "stone's throw" from a beach that was the obvious intermediate objective of the naval forces looming large at sea.

A follow-on underlying concept that goes hand-in-hand with OMFTS is Ship-to-Objective Maneuver (STOM). While OMFTS is the concept that turns the sea space between the ships and land into an operational and tactical asset, STOM is the concept that moves warfighters beyond the gravitational forces that throughout the early days of amphibious warfare ensured a slow, laborious, and vulnerable movement from the ships, to the beachhead, and ultimately to the objective. The intent is to eliminate the beachhead as a vital intermediate objective as warfighters project naval forces seamlessly from the ship to the final objective, by-passing enemy strengths. Technologies such as the MV-22 Osprey, the CH-53E Sea Stallion, the Advanced Amphibious Assault Vehicle (AAAV), and the Landing Craft Air Cushioned (LCAC), along with other technologies perhaps not yet on the drawing board, will work in concert to project naval forces, as seamlessly and as rapidly as possible, from ships over the horizon to designated final objectives inland.

OMFTS and STOM will be enabled by a third underlying concept, seabasing. Logistical planning to sustain forces transitioned ashore has always been one of the more difficult endeavors in amphibious warfare. In addition to requiring tremendous lift capabilities to move supplies and other support capabilities to the beachhead, protection and mobility of these assets has proven problematic.

Seabasing is the critical enabler that will eliminate the undesirable build-up ashore of supplies and other support activities necessary to sustain littoral power projection. These supplies and support activities will remain at sea, over the horizon, in a networked, responsive seabase of naval ships that will give commanders added security, surprise, and tremendous flexibility in their decisions regarding the forces, capabilities, and support they will take as they depart the seabase for designated objectives. The seabase will also provide the capability necessary for forces to quickly reconstitute so they can transition to follow-on missions.[1]

Seabasing is indeed a tremendous step forward in naval expeditionary warfare, a step very much in line with the call for the transformation of all US armed forces to exponentially greater capabilities -- skipping incremental improvements in their paths to the future. But seabasing is not necessarily the "be all and end all" for the employment of certain capabilities for battlefield use. Positioning certain capabilities on a seabase is certainly more advantageous than arranging them into a "steel mountain" on a beachhead, but what if warfighters could use certain capabilities and assets in naval power projection without having to physically displace them to the theater of operations? What if commanders in the theater of operations could efficiently and effectively use enabling capabilities located thousands of miles away, eliminating not only the need for a beachhead but also the need for space in the berthing compartments and well-decks of the ships forming the seabase? What if some assets could be left behind at a home base and then rapidly displaced to the theater when needed? And would such a capability provide a strategic advantage as well as an operational or tactical advantage to US naval forces? The answer to these questions lies increasingly in a quickly-developing enabling capability called "reachback."

While a formal service, joint, or NATO definition has yet to be crafted, reachback typically refers to instances in which warfighters located in a distant theater access the capabilities of remotely-located people and informational resources through their C2 systems. It is also used to describe situations in which commanders leave certain physical assets and capabilities at a home base and then rush them to the theater when needed … this is typically referred to as "physical reachback." The application of reachback is certainly not limited to military use as many civilian and other government enterprises have effectively used reachback to streamline and improve their operations. Perhaps the most notable example of reachback occurred during the Apollo 13 mission when Jim Lovell made the often-repeated declaration, "Houston, we have a problem." Not just a problem, but a life or death drama for which Lovell reached back thousands of miles to Earth where a group of NASA scientists put their heads together to solve a mission-critical dilemma. All of the military services have used this capability in one way or another and are quickly coming to the point in some functional areas where reachback is the commander's preferred method for accessing vital capabilities. Considering the inherent strategic advantages of reachback as well as its favorable applications and experiments to date at the operational and tactical level, the Navy and Marine Corps must articulate reachback as an important complementary capability to seabasing to more fully establish the transformational value of their capstone concept, NEMW.

To support this basic premise, this paper will start by assessing and analyzing important strategic advantages derived from reachback. Following that analysis, the paper will review the reachback applications and experiments of the various services, organizing the discussion largely around the six battle space functions, including command and control, fires, force protection, intelligence, logistics, and maneuver. While most of these applications and experiments have been favorable, there are clearly some cautions that must be carefully considered as the Navy and Marine Corps, within the joint community, experiment with how best to complement and optimize seabasing with reachback capabilities. These admonitions will be identified and discussed along with some thoughts on mitigation. In conclusion, the paper will suggest a modification to the seabasing program as articulated in "Expeditionary Maneuver Warfare," the Marine Corps' capstone concept document, as well as in its annual publication entitled United States Marine Corps Concepts & Programs.[2]

STRATEGIC IMPLICATIONS OF REACHBACK

While there has been a good deal of analysis and writing conducted on reachback among all of the services, particularly the Air Force, little of it has been directed toward the strategic implications of this enabling capability. The discussion invariably revolves around the technical and tactical implications of reachback within a given functional area. Although the technical and tactical advantages and implications are indeed significant, it may very well be that the strategic advantages of reachback will ultimately be the primary drivers of its proliferation throughout the defense establishment. Some of these advantages are merely an extension of those provided by seabasing while others are advantages that go above and beyond what can be achieved through seabasing. The strategic areas which will most notably be affected by reachback include strategic mobility constraints, defense budget maneuvering, overall national power application, diplomatic and host nation support agreements, and force protection.

STRATEGIC MOBILITY CONSTRAINTS

The United States armed forces have, in the post-Cold War era, been inundated with a host of crisis response requirements and there is no strong indication that the emergence of those requirements will subside any time soon. Unlike the Gulf War when Saddam Hussein allowed the US and its allies a long build-up period, most crisis response requirements have not offered such generous timelines on which to move capabilities into a given theater of operation. The competition for strategic mobility assets has, as a result, intensified as the services seek to maintain relevance and race to play a leading role in the newest crisis in the far corners of the world.

The United States Army, recently feeling the sting of not playing the initial leading ground role in Afghanistan, seems to be intensifying its transformational focus on lightening its load so that it is better configured to get to the fight quicker. Katherine McIntire Peters, in discussing Army Chief of Staff General Shinseki's views on an Army logistics transformation, recently wrote, "Under Defense Department's direction, the Army is leading a study of mobility issues facing the department … a long-term source of tension among the services."[3] Much of the answer does logically seem to lie in increasing US strategic mobility assets, yet this asset shortage must compete with a myriad of other equally-pressing requirements during a time when high-priced technologies are the leading ingredient in each service's quest to transform vast portions of their capabilities. While the United States Army is eager to have the United States Air Force build more C-17s and the like, the Air Force has an equally, if not more, pressing need to keep its over-worked fleet of fighter and bomber aircraft ready and modern to respond to America's insatiable appetite for air power as a primary means of military crisis response. Furthermore, the Air Force effort to become more expeditionary has further diluted the number of strategic airlift sorties available to the other services. Since expeditionary aerospace support activities must be moved to the theater to support the initial air campaign, the lift of other service capabilities will certainly be impacted if lift capabilities are not increased.

The United States Marine Corps, linked inextricably as it is to the Navy's amphibious shipping fleet, must work through frustrations not unlike those of the United States Army. In a recent Marine Corps War Room Report that discusses Amphibious Ship Building in POM-04, the statement is made, " … Although there are positive signs with regard to the health of the amphibious fleet, there are several serious and persistent deficiencies in the overall proposed program."[4] The United States Navy has a great deal more to be concerned with than just amphibious lift and littoral power projection despite a continuously-documented amphibious lift requirement of 3.0 Marine Expeditionary Brigades (MEB) with which it agrees.[5] As the most technologically-intensive service, the Navy has an aging and overworked fleet of aircraft that it must maintain and replace, and there is no less a fascination with extremely expensive, high-tech ships and submarines that can fire cruise missiles from afar to help respond to the latest crisis.

Is this to say that strategic mobility assets are not an important priority? Absolutely not. They are vital ingredients to our overall national military power but they must compete with other ingredients, particularly "in vogue" ingredients such as high-tech aircraft, precision-guided munitions, sophisticated communication and information processing systems, advanced ships, and rising "people costs" that invariably take their toll on other programs. So the familiar

message of “do more with less” or at least “do more with the same” clearly seems to apply. And if that is the message, which this author believes it is, the answer seems to lie in finding more efficient ways to use the strategic mobility capacity the US already has.

Part of this efficiency can come through reachback configurations that enable warfighters to cut the size of their Time Phased Force Deployment Data/List (TPFDD/Ls), bringing only those things to the fight that must actually be at the fight to have their intended effect. While the specifics of those capabilities will be discussed in the follow-on section of this paper, it is important at this point to gain an appreciation for the potential magnitude of the efficiencies involved. In one of the more prominent analytical papers written on reachback, Air Force Colonel Scott Britten discusses the potential efficiencies associated with operating a Joint Air Operations Center (JAOC) supported by a reachback configuration. Britten explains, with the concurrence of the US Central Command JAOC Director, that as many as 800 of the 900 personnel in a typical JAOC and between 50 and 70 percent of the associated work stations could be located in CONUS with the help of a reachback system.[6] This impact is not trivial with respect to strategic mobility when one considers that deploying this entire JAOC to the theater requires 41 C-141 loads for the equipment and three "widebody" airliners for the people to operate it.[7]

Britten takes his analysis one important step further, particularly as it relates to the Navy and the Marine Corps. He assesses the impact on the size and capability of a JAOC afloat explaining that a command and control ship used to operate a JAOC currently has the communications and deck space limit for a staff of 280 people who can plan and execute about 800 sorties per day. He goes on to explain that the Navy’s estimate of the capacity of one of its command and control ships for directing sorties from a JAOC afloat jumps to as many as 2,000 sorties per day with surge capacity as high as 3,500 if the JAOC afloat were to be supported by a reachback system.[8]

Britten’s analysis takes on added importance for the Navy and Marine Corps because not only does it suggest that the JAOC can do the same air planning currently conducted on a command and control ship through reachback, it also suggests that the JAOC can increase its current capacity by two to three times. Such a transformational jump in capability for the Navy and Marine Corps makes naval expeditionary forces even more robust and relevant in larger-scale conflicts and may no longer make it a foregone conclusion that the Joint Forces Air Component Commander (JFACC) will be an Air Force officer ashore.

Joint air operations planning is but one area in a vast array of capabilities and agencies that are candidates for reachback to play a role in realizing strategic mobility efficiencies. And in

the lexicon of the military, many of these capabilities and agencies represent the “tail” of military forces. As vital as these pieces of the “tail” are, they take up valuable space on our strategic mobility assets, space that is needed for the “teeth” that must be expedited to the theater to have their intended full effect in a crisis response operation.

DEFENSE BUDGET MANEUVERING

Budgetary limitations, in many instances, take the form of strategic mobility constraints as they relate to reachback. But reachback can have implications for budgetary limitations and "political" maneuvering that extend well beyond those related simply to the cost of strategic mobility. As the United States Army recently learned from the cancellation of its next generation artillery system (the Crusader), the administration generally and the Secretary of Defense specifically do not have tolerance for plans and visions that are based on largely incremental improvements in the military-related technologies of yesterday. The President was clear throughout his campaign and remains clear today that he fully expects our defense establishment to transform … to by-pass generations of technology so that the United States military continues to maintain its notable lead among the armed forces of the world.[9]

“Rice bowls” and “pet projects” appear to be breaking up in a corporate culture where decision makers are not necessarily paying deference to plans and commitments that are simple extrapolations of yesteryear’s concepts and methods. And by and large, this approach seems to be resonating loudly and clearly with a country that is fascinated to learn what the next generation and beyond of technology will bring. In a recent CNN news story, the reporter appeared to see few, if any, downsides to a decision made to spend $460 million for a defense contractor to develop an unmanned bomber … all indications were that this was indeed a great step forward that furthered the American people's intense demand for casualty minimization.

What’s the point? The point is that the services are in a strategic environment where the administration seems to be rewarding those who boldly move forward to harness advanced technologies that help maintain US primacy in the world. Reachback has essentially been made feasible because of vast investments in information technology that have provided the necessary links from the warfighter or businessman in a distant location to a base or office at home … an arrangement that in the civilian sector has resulted in a huge benefit by way of many corporate bottom lines. It is the recognized way of the future for conducting operations faster, easier, and cheaper, be it in the civilian or military sector. When the services recognize this fact and capitalize on it in the articulation of their programs, they stand a much better

chance of successfully defending and maneuvering their overall budgetary requirements through the administration.

The seabasing "programmatics" and budgetary requirements, if not properly articulated, could set the Navy and Marine Corps up for another Crusader-type major program cancellation. For years, the Navy and the Marine Corps have been reducing the amount of supplies and other support activities they take off the ships during expeditionary operations. As such, they have evolved gradually to the point where they can now fully articulate seabasing as the way they will sustain naval expeditionary forces in the future. But the Navy and Marine Corps must remember that they are not the only people in the world who recognize their gradual evolution to seabasing and that fact could be important when the budgets needed to pay for a networked seabase of ships must be defended. By fully fleshing out reachback as an important complement to seabasing in all those functional areas where it is relevant, the Navy and Marine Corps stand to optimize their seabasing requirements and, as such, increase the probability that the bill payers will deem their investment essential, affordable, and sufficiently forward looking. Furthermore, it could well be that the Marine Corps' long-standing fundamental requirement for 3.0 MEBs worth of amphibious lift may be realized because it has reduced the lift requirements of each MEB through reachback.[10]

OVERALL NATIONAL POWER

Colonel Britten, in his analysis of how a JAOC afloat could actually improve its overall capability if supported by reachback, provides a good starting point for seeing how reachback can actually increase military capabilities and power. His point is clear, the strategic mobility freed up by not physically bringing certain people and equipment to the theater can be used to bring additional warfighting capability for which we cannot reach back. But what about the impact on the nation's power beyond the military dimension. Could reachback capabilities be a critical integrator that enables other elements of national power to synergistically expand the possibilities for how the US projects its power and influence during times of crisis?

General Charles C. Krulak, former Commandant of the Marine Corps, answers this question with enormous clarity and vision in a 1998 speech to the Armed Forces Communications and Electronics Association (AFCEA) and the Naval Institute West as he discusses what US forces must do to prepare for the 21st century. General Krulak stated:

> "One of the breakthrough concepts employed by CBIRF [Chemical and Biological Incident Response Force] is a reachback capability whereby a doctor on the scene can make full use of consultation by the nation's leading experts in a number of related fields. Our Subject Matter Expert Group, led by Dr. Josh Lederberg, a Nobel laureate, and composed of 8 nationally and internationally

> recognized civilian experts in science and medicine, is virtually at the scene of crises with the doctor and with the commander. This kind of reachback capability, if harnessed at the national level, could be of inestimable value in time of crisis. Think of the industries and agencies represented here, and out there on that exhibition floor. What if the commander at the scene of a crisis, or the CINC, or the NCA, could have instant, unfiltered access to the leaders and engineers represented here. What if we could expand that access to include: environmental experts, computer programmers, information analysts, construction professionals, and structural engineers, all manner of governmental agencies, non-governmental organizations, specialists and wizards in every field imaginable … Then, we will have mastered our real national power. This is new thinking. It presents new challenges. It is the way of the future."[11]

This is the potential of reachback. General Krulak was not just talking about some added tactical capability that a commander might soon have to assist in dealing with some technical problem on the battlefield. He is also not merely talking about leaving a few embarkation boxes and people at home to make room for some extra M16A2 ammunition. He is talking about reaching back to bring powerful informational and analytical capabilities from every element of the national fabric to deal with the enormous complexities of the battlefield in a real-time manner. He recognizes America's strategic advantage in information and is focusing the audience on using that advantage to enhance the US's overall power and influence as a nation. His vision further compresses the strategic, operational, and tactical levels of war and has the potential to drastically improve the speed of decision cycles. Certainly this potentially overwhelming access to vast amounts of information could present certain managerial challenges but filtering processes continue to be refined that ensure commanders and their staffs are linked to information assets, not liabilities.

Major General Daniel P. Leaf, USAF, director of operational requirements at the Pentagon and former wing commander at Aviano Air Base during OPERATION ALLIED FORCE, expresses an equally optimistic view of reachback and its all-encompassing value to the military. Referring to his experiences in OPERATION ALLIED FORCE, Leaf recounts, "… They had the potential to be even more effective since it was possible to access a multitude of assets." He goes on to state, "we want to expand our ability to leverage these capabilities … we're really talking about the horizontal integration of all our capabilities. The goal is to reach a point where the maximum number of people or weapon systems that can take advantage of a capability or tool, are given ready access to it … there were people from all over who were contributing and their location didn't matter as much as the importance of their contributions."[12]

Despite some question about the number of major theater wars the US can attend to simultaneously, Leaf recognizes the possibility that the US might not enjoy the luxury of dealing with one conflict at a time. As Leaf explains,

> "… during the Cold War, our focus was primarily on the Soviet Union and Warsaw Pact threat. Now we're not sure where we will be next. That unpredictability of where we may be called to apply air and space power mandates more flexibility. Reachback gives us flexibility. It allows us to more easily shift our efforts globally. This is important, especially if the Air Force is conducting several ongoing operations. Reachback gives us the opportunity for multiple theater commanders to access a capability and serve multiple customers simultaneously."[13]

Major General Leaf's vision for reachback is also clear, he sees it as a capability that expands the nation's ability to multiply and project its military power in a world of multiple and unpredictable challenges.

DIPLOMATIC AND HOST NATION SUPPORT AGREEMENTS

Building coalitions is not a new requirement for national and military leaders … it is an enduring and ever-increasing requirement for conducting successful warfare in the 21st century. Despite strong international relations with friendly countries around the world, each crisis situation provides its own set of challenges in which even a nation's best friends have interests and issues that make coalition building a challenge. The array of possibilities for how a particular ally might assist the US ranges from unfettered access to its forces and sovereign territory, to a simple affirmation of the US's intended response with no accompanying material support whatsoever, to total disagreement with the US's intent to respond to a given crisis.

Robust naval expeditionary forces have always been critically important in a world where coalition building is a significant challenge or takes excessive time to complete. The US's ability to conduct sustained operations from the sea has often been the difference that has allowed it to respond effectively when other nations are not inclined to provide support by way of forward basing or "overflight" rights for other types of forces. In 1986, when the French would not provide the US with permission to fly over France en route to the bombing of Libya, the national command authority nearly had to turn to a solely naval response. Ultimately, Britain allowed the F-111s to fly from its soil to support the operation but the planning to incorporate those aircraft, while successful, was strained by the requirement to fly around Spain through the Straits of Gibraltar with significant aerial refueling en route.[14]

While seabasing will undoubtedly assist in minimizing host nation support requirements, and in turn potentially increase a potential host nation’s receptiveness to supporting US military

action, one can never dismiss the possibility that during sustained operations, naval expeditionary forces will require some amount of territory in a foreign country with associated support requirements from a host nation. The negotiations to conclude such support agreements will invariably include concerns about the size of the footprint, the degree of intrusiveness of that footprint, and the extent to which that footprint creates a significant target on the host nation's soil.

Reachback is one means by which to reduce that footprint, thereby minimizing US dependence on host nation support agreements and the size of the target the US places on another country's soil for adversaries to exploit. These are not small issues. Those who have recently returned from Saudi Arabia remark that the footprint of US forces in that country is large and were it not for the mutually supportive theater missile defense capability provided by US Patriot batteries, the footprint may well have become a highly controversial burden for Saudi Arabia.[15] Beyond potential Saudi Arabian concerns, that footprint in the heart of the Islamic world is most certainly a source of irritation for Islamic fundamentalist groups worldwide and an irritation that will likely be the basis for continued terrorist activities.

At a time when the US is contemplating further military action against Iraq, its dependence on Saudi Arabia is undoubtedly high. The less of an intrusion the US is on that country and the smaller the targets the US locates on their soil, the greater the chance the US will enjoy a constructive, mutual relationship with Saudi Arabia against a common foe.

But reachback could also present a bit of a challenge as well when it comes to coalition building. Face-to-face communication between senior military commanders from the various members of the coalition is important to ensuring a successful coalition. This is but one of the concerns with reachback to be discussed further under the heading of "Admonitions."

FORCE PROTECTION

Force protection, typically discussed as a battle space function at the operational level of war, has truly emerged as a major strategic concern. In a world where warfare has continued in recent years to produce few, if any, casualties for the US, every death or injury is afforded a major expose in the media. The US's enormous technological advantages and the operations they enable the US to conduct have increased the expectations of the American people and its national leaders to an almost unrealistic level with respect to minimizing casualties. One could rightfully conclude that the greatest critical vulnerability of American forces is friendly casualties to any degree and therefore it is an area that US commanders must continue to refine, where possible, to ensure the safety of our service men and women. Following the terrorist acts of

9/11, force protection has taken on an even more far-reaching dimension as American citizens now are overt targets both at home and abroad.

At the lowest tactical level, unit commanders are now directing the assignment and training of officers uniquely skilled in the art and science of protecting service men and women as well as their equipment and installations from a wide variety of threats. For good reason, force protection has become a fundamental part of everything the services do in the Department of Defense … no plan passes muster without it having been closely scrutinized for proper risk management to minimize unnecessary exposure of service personnel to threats. Terrorist attacks on the Marine Barracks in Beirut, Khobar Towers, and the USS Cole are stark reminders that the US must never become complacent in its force protection planning and execution.

Reachback is an effective means by which to reduce the exposure of US service men and women and their equipment to force protection threats. As such, it effectively serves as a target minimization measure. Harkening back to Colonel Britten's analysis on the JAOC, one can quickly see that a nearly 90 percent reduction in the number of service personnel who must deploy abroad to operate the JAOC (one agency in a sea of many) is an enormous step forward in reducing US troop exposure to possible threats. And while people are the most important resource deserving of the greatest concern, equipment and systems must also be protected from not only the threats of the enemy but also from the sand, wind, water, and salt that can brutalize them and increase the cost of operations and maintenance.

The current Commandant of the Marine Corps, General James L. Jones, Jr, in his initial "Commandant's Guidance," helped provide the mindset that is necessary to fully appreciate the value of what he refers to as the "fifth element" of the MAGTF [Marine Air Ground Task Force], our bases and stations at home. As he states, "… Installations are the 'platforms' from which we project expeditionary power by deploying and sustaining MAGTFs. They will continue to grow in importance as we fully implement our future doctrine and the 'reachback' requirement it demands."[16] It is hard to imagine that General Jones was not, in part, referring to the force protection priority of military bases and stations when referring to their increasing importance in power projection.

But force protection works both ways. As the US works to reduce the presence and exposure of its people abroad through reachback, it must remember that it is, in effect, moving important lucrative targets for the enemy back into its homeland thereby increasing the possibility of further attacks within the homeland. While the continental US is presumably a safer place than the typical theater of operation, the US must be vigilant to ensure it does not dismiss the risks that can still face its forces even if they remain at home. In a follow-on section

of this paper entitled “Admonitions,” this potential unintended consequence of reachback operations is discussed.

CONCLUDING THOUGHTS AT THE STRATEGIC LEVEL

As discussed in the next section of this paper, reachback has proven effective in streamlining, speeding up, and improving operations in a wide range of functional and tactical areas. But its value to the Navy and Marine Corps along with other military forces and the nation resides more so in its strategic advantages than in its tactical and technical value. From reducing constraints on strategic mobility, to garnering support in the current budgetary and political processes, to increasing the effective application of overall national power, to reducing the friction of diplomatic and host nation support negotiations, to improving force protection, reachback is a potentially powerful strategic capability that has earned a rightful place along seabasing as one of the most important capabilities needed to fully realize the vision of NEMW.

Having explored the strategic implications of reachback, it is now important to drill down to a more detailed understanding of how reachback is actually being used to support warfighters at a functional level. These applications range from firmly institutionalized procedures in some functional areas to applications that are still very much in their conceptual development in others.

A LOOK AT REACHBACK AT THE FUNCTIONAL LEVEL

While reachback has very promising strategic advantages, these advantages are ultimately derived from one's ability to use this capability to support functional areas at the operational and tactical levels of war. Reachback is very much a venture in the "art of the possible" and a small taste of its application within a given functional area can quickly cause people to see more and more possibilities for how it might better complement seabasing as well as other aspects of warfighting in and out of the Navy and Marine Corps.

When delving into these specific applications of reachback, it is necessary to recall that the term reachback is also used to characterize situations in which commanders leave certain physical assets and capabilities behind and then rush them to the theater when needed. “Physical reachback" is of particular importance to the Navy and Marine Corps as one of their major considerations is conserving space on the seabase. Whether the Navy and Marine Corps reach back to use certain assets at a home base or bring others to the fight in a "just-in-time" mode, the effect can essentially be the same … a reduction in the size of the seabasing requirements.

COMMAND AND CONTROL

Command and control, focused as it is on information requirements, lends itself to extensive application of reachback capabilities. As the applications discussed below will demonstrate, there is no intention for the entire command and control capability in a given headquarters to be accessed through reachback even though the technical infrastructure may support such an arrangement. As discussed in the "Admonitions" section of this paper, commanders and their primary advisors have and will continue to place themselves on the battlefield where their presence fulfills a great many leadership imperatives. Large portions of their staffs, however, can and have provided and enhanced their capabilities through reachback.

While Colonel Britten made the case conceptually in 1997 for how reachback could assist the JFACC in the command and control of air operations, the Air Force took reachback a step further in September 1998 at Eglin AFB, Florida during its Expeditionary Force Experiment (EFX) 98. During this exercise, Lieutenant General Lansford Trapp, using Eglin as a simulated allied country under attack, ran a forward air operations center (AOC) with only 115 command and control personnel. A rear area AOC of some 300 people was located at Langley AFB in Virginia. According to Lieutenant Colonel Rocky Kimpel, deputy director for EFX 98, the personnel in Eglin used video teleconferencing, internet, radios, telephones, and other means of data transfer to communicate with their counterparts at Langley. While the rear AOC in Langley had a mere 300 people operating it, Langley can accommodate many more terminals using the parking lot outside, wired as it is with cables and electrical lines, to expand the AOC with tents and trailers in a real war. As EFX 98 wrapped up, Air Force Chief of Staff General Michael Ryan stated the "distributed" command and control effort worked "in some cases … very, very well."[17]

EFX 99 furthered the Air Force's confidence in its ability to control deployed aerospace forces from afar. According to the director of the Air Force Experimentation Office, Colonel Terry Thompson, the results from the experiment support the Air Force's new expeditionary structure and mindset. Lieutenant General Trapp, the JFACC for both EFX 98 and 99, stated, "we demonstrated the viability of providing, on demand, a 'virtual' command and control process that supports our new expeditionary vision … we have got to get more of these processes and technologies … into the warfighter's hands." Air Force Chief of Staff General Ryan's confidence was sufficiently boosted in EFX 99 that he approved the establishment of a permanent stateside operations support center to provide "reachback" support for future contingency operations and deployments.[18]

While the Air Force clearly appears to be out in front with reachback experimentation and application, they are not alone in their recognition of this important capability. In a very recent article on transforming Marine Corps command, control, communications, and computers (C4), Brigadier General John R. Thomas, Marine Corps director for C4, highlighted how reachback through defense department information systems for command and control, intelligence, and logistical support enhanced the Marines' strategic agility in Afghanistan. Brigadier General Thomas went on to discuss a host of significant technological enhancements being made by the Marine Corps that will improve the ability of its expeditionary forces to reach back for various resources. [19]

While the list of instances in which reachback has actually been used to support command and control functions such as operational planning is significant, the list of future plans for using it is much greater. In the vast array of literature discussing the future of command and control processes and systems, reachback is a constant theme. There appears to be no doubt that reachback is quickly finding an enduring role for supporting command and control functions throughout the services.

FIRES

Applications of reachback to the battle space function of fires have perhaps been the most publicized. Through the use of satellite technology, national agencies located in the US have been able to provide warfighters in the theater (and almost simultaneously the American people) with vivid images of battle damage from air and Tomahawk missile strikes. However, in OPERATION ALLIED FORCE, the American people were also introduced to the other form of reachback that involves bringing home-based capabilities quickly to the theater as needed only to return them to their home base immediately thereafter. This occurred when Air Force B-2 bombers from Whiteman AFB in Missouri made a 31-hour non-stop round trip to Kosovo to drop their payloads of 2,000 pound joint direct-attack munitions (JDAM).[20] This incredible display of global reach by the Air Force using physical reachback was arguably one of the most dazzling displays to date of what is possible with reachback. While closer basing of these aircraft to the theater would have improved their availability and reduced the extensive refueling requirements, the fact is that even in the most extreme case (i.e., being based in the US), the Air Force demonstrated the ability to effectively bring these reachback fires to bear in Kosovo.[21] When one combines the scene of these aircraft departing from and arriving back in the US, highly publicized as it was, with recent news stories about the development of unmanned bombers that

will limit the exposure of America's sons and daughters to various threats, it is not difficult to see to the prominent role reachback fires might play in the future of warfare.

While Navy and Marine Corps fighter and attack aircraft perform a different mission than Air Force bombers in that they must remain at sea to protect the ships and assist in the projection of littoral power, we can still learn a great deal from this reachback experience of the Air Force. Even though the applications ultimately derived from the Air Force experience may not be in the area of fires for the Navy and Marine Corps, it is clear that this global reachback capability will likely find enormous application for other aspects of naval power projection such as the replenishing of supplies and the provision of selected low-density maneuver units that must remain in general support of multiple theaters at a distant location.

FORCE PROTECTION

Force protection has been elevated in this paper to a strategic concern that was previously addressed. The force protection value of reachback at the tactical or functional level has been inherent in the applications and experiments to date. In and of itself, force protection does not appear to have been a primary reason for using reachback. But the value of the inherent force protection in reachback by reducing forward-based forces has not been lost on those using it as noted by Lieutenant Colonel Rocky Kimpel during EFX 98. He noted that the 1991 Persian Gulf War AOC required the management effort of nearly 2,000 people based in Riyadh, Saudi Arabia. Kimpel notes that it would be a "nightmare" if, in a similar conflict, a forward-based AOC took a hit from a missile or car bomb. He goes on to note that while the Gulf War AOC was underground and well-protected, other theaters may not have similar facilities.[22]

INTELLIGENCE

Much like command and control, the provision of intelligence support is information intensive and lends itself to a reachback arrangement. Perhaps the most poignant and compelling example of intelligence reachback for expeditionary operations occurred recently as Brigadier General Michael Ennis and his staff at the Marine Corps Intelligence Activity in Quantico, Virginia supported Brigadier General James Mattis and his Marines and Sailors of Task Force 58 in Afghanistan. According to Brigadier General Ennis,

> "what allowed TF-58 to remain constantly engaged and able to react to spontaneous enemy activity was … reachback. Due to the tremendous communications architecture developed by and available to Task Force 58 at Camp Rhino and the dedicated effort of a small band of rear echelon intelligence professionals at the Marine Corps Intelligence Activity, the very small Task Force

> 58 intelligence shop of four people was able to order and receive, in less than 24 hours, intelligence products to support day-to-day operations .... Task Force 58 never had to slow down its operational tempo ... the Marine Corps Intelligence Activity, through reachback, supported operational requirements in less than 24 hours thereby sustaining the tempo of operations."[23]

Brigadier General Ennis' enthusiasm is unequivocal for reachback intelligence ... "It should now make this standard procedure for future expeditionary operations."[24]

During OPERATION ALLIED FORCE, the Air Force also effectively used reachback to support their intelligence requirements. U-2 imagery was transmitted to a ground station in Italy where it was then relayed to Beale AFB in California for analysis and refinement. Within 30 minutes, the analysts sent command posts in the European theater the intelligence products they needed to support target selection.[25]

Much like the literature on the future of command and control, reachback is a constant theme in the discussion of how intelligence assets will support warfighters in future conflicts. And while in many cases reachback is still very much in the experimental and conceptual stages, it is clear that it has played a leading and effective role in the area of intelligence in real-world conflicts over the past several years.

LOGISTICS

Logisticians continue to make great strides forward in transforming supply and maintenance activities by effectively combining both types of reachback. Information reachback capabilities supported by physical reachback is playing a very prominent role in the continuing development of what the Marine Corps and joint community refer to as "precision logistics." Precision logistics, a component of the Marine Corps' Integrated Logistics Capability (ILC), has as one of its primary underpinnings the concept of minimizing inventories through improved distribution. An inventory-intense approach to sustaining expeditionary forces is glutinous in terms of space management. This presents significant challenges for the concept of seabasing since space aboard the ships is a major planning constraint. But by refining the inventory and supply chain processes and the technologies that support them, logisticians can minimize the volume of supplies that must be stored on the ships by effectively substituting inventories with fast and accurate distribution. By improving supply processes, information technologies, and the reliability of distribution systems, logisticians can use physical reachback for sustaining warfighters vice having to store large quantities of supplies aboard the ships.[26]

These logistical enhancements are not unique to Marine Corps ground supply processes. As a combined arms force, the Marine Corps also has a significant aviation supply and

maintenance requirement. The enhancements being made on the ground side of Marine Corps supply have not been lost on the aviators. They too are capitalizing on the same supply chain concepts and technologies that will reduce their logistical footprint while providing timely supply support for aviation assets.[27]

In a recent example of reachback in an actual operational environment, the Army engineers were able to keep poorly-constructed runways operational in Kandahar, Afghanistan by use of "tele-engineering." A small number of engineers on the ground was able to link back to pavement specialists from the Corps of Engineers located in the US to get the expert information they needed.[28]

In the area of medical support, any number of experiments have been conducted, most notably by the Air Force, using a reachback system to assist in the diagnosis and treatment of battlefield casualties including those with injuries related to biological and chemical weapons. This capability was tested in January and February 2001 during an Air Force exercise entitled Pacific Warrior conducted in Hawaii.[29]

In a similar civilian experiment in Atlanta, the Center for Emergency Response Technology, Instruction and Policy of Georgia Tech Research Institute, funded, in part, by the Marine Corps Warfighting Laboratory and the Marine Corps Systems Command, developed medical reachback capabilities that would allow "first responders" in a bio-terrorism situation to transmit vital patient information to hospital emergency rooms for diagnosis and initial treatment. As the researchers point out, the amount of time to save these victims is very limited and appropriate antidotes must be administered at the scene of the incident if there is to be any hope of saving the injured person.[30]

The entire functional area of pay and personnel services support also lends itself to being provided via reachback. In the 1997-98 timeframe, the leadership of the Marine Corps decided to divest itself of its labor-intensive approach to providing this support. In response to a reduction of just over 1,000 administrative positions Marine Corps wide, a number of limited experiments were conducted by the First Marine Expeditionary Force (I MEF) in Camp Pendleton, California to pave the way for streamlining pay and personnel services functions. These tests included conducting reachback to provide pay and personnel services support for the 2,100-man Marine Expeditionary Units deploying to the Pacific theater. While there were growing pains in these experiments, they ultimately demonstrated that sending small liaison elements forward that can electronically evacuate pay and personnel services problems to a rear area capability is an effective way to provide this support. Furthermore, this configuration also provides the commander with a rear area capability that can deal directly with many of the

family member-related problems that inevitably surface during deployments. These experiments at Camp Pendleton ultimately helped pave the way for an entire new vision for how the Marine Corps will provide pay and personnel support services in the future … reachback for deployed units represents a significant part of that new vision.[31]

MANEUVER

While maneuver commanders are certainly in a position to reach back for command and control capabilities, intelligence information, and logistical support, it stands to reason that the applicability of reachback is limited in terms of the fighting vehicles, artillery, and the Marines on the ground who make up the battle space function of maneuver. But again, physical reachback must be taken into account. While the logisticians will likely make the most use of physical reachback in managing their supply chains, others are clearly seeing its potential value for various maneuver capabilities as well.

In a draft Marine Corps concept paper written in 1997 for riverine operations, the Marine Corps articulates the applicability of reachback to riverine capabilities as follows:

> "Taking into account the limited lift space available, forward-deployed naval forces will be augmented through a reachback capability to additional specialized equipment and trained personnel. These forces will be available on short notice, in predetermined task-organized force modules, to be deployed via high speed surface or air means. This physical reachback capability will provide a means for deployment from continental United States or intermediate staging bases to the area of operations, providing for at-sea arrival and assembly. Critical to this ability is tactical integration at sea with the forward-deployed MAGTF, eliminating the requirement for access to secure ports and airfields."[32]

With the recent stand-up of the Marine Corps' 5,000-Marine anti-terrorism brigade at Camp Lejeune, North Carolina … a capability that has enormous application at home and abroad in the war on terrorism … it is not at all difficult to envision the Marines providing this capability at a moment's notice on a physical reachback basis around the world.[33]

CONCLUDING THOUGHTS ON THE FUNCTIONAL APPLICATIONS FOR REACHBACK

The applications, experiments, and emerging concepts for using reachback discussed above are only the "tip of the iceberg." This is clearly a growth industry in which those who are combining pragmatism with imagination are quickly finding applications to improve the efficiency and effectiveness of warfighting methods at the operational and tactical level while also providing the nation with a strategic advantage. But while the literature on reachback is almost exclusively optimistic, if not a bit euphoric in some cases, there are those discerning warfighters who are also asking the hard questions. While many of these hard questions have answers in

theory, the services must ensure they find the answers in practice as well. In the follow-on section of this paper, reachback "Admonitions" are explored and approaches to mitigating them are discussed.

ADMONITIONS

No new capability, despite all of its promise, comes without limitations and warnings that must be addressed. Reachback is certainly no different. This section of the paper discusses these admonitions grouping them loosely into three categories (cultural change – human dimensions, technical issues, and force protection). Additionally, some approaches to mitigating these problems as well as some required mindset changes are explored.

CULTURAL CHANGE – HUMAN DIMENSIONS

As United States Marine Corps Concepts & Programs 2002 clearly articulates, " … Organic sustainability will continue to be the hallmark of truly capable forces around the globe …"[34] This organic mindset has held the Navy and Marine Corps in good stead throughout the years, giving commanders the autonomy and resources to take quick, decisive action when called upon to do so in times of crisis. General James L. Jones reinforced this clearly in his guidance upon assuming his position as the 32d Commandant of the Marine Corps, "we must do everything in such a way that commanders have absolute confidence that required support will be provided when and where it is needed."[35] At its essence, this means that reachback must work reliably and responsively and that the Navy and Marine Corps must not rush haphazardly into this capability without making sure that forward-deployed commanders have the confidence to which General Jones is referring. One way to summarize the cultural side of these admonitions is by way of an expression articulated by Major John Neal, the "human dimension."[36]

This human dimension has many interwoven components but its overarching theme clearly appears to be "trust." Some might argue that commanders might be opposed to reachback because it reduces their direct control over a given resource or process … they can't reach out and touch someone if things are not going right or if the required support is not there when needed. While that could be the case given the personalities involved with any given situation, it is probably not a sufficiently comprehensive view of why commanders might express reluctance to embrace reachback. A more comprehensive assessment resides in what Clausewitz refers to as the fog or friction of war or in Murphy's Law (whatever can go wrong will go wrong). Accountability will be a key to making sure that reachback capabilities promptly and effectively support the commander. Those who are supporting from thousands of miles away

must appreciate their critical connection to the warfighters who are engaged in a theater with bullets flying. The forward-deployed commander must have more than a "wire-diagram connection" to the rear area commander who is charged with getting the support to him. Brigadier General Ennis, in supporting Brigadier General Mattis in Afghanistan with reachback intelligence, clearly articulates the essence of this human dimension:

> "Relying on anyone outside the combat zone is risky. The sense of urgency has a tendency to drop off dramatically the farther one resides from the smell of gunpowder. Moreover, there is a tendency for the requirement to lose something in the multiple translations it goes through between the time it is formulated and the time it is actually met. And finally, rarely, even in exercises, have Marine commanders allowed their future operations cells to reach back for its intelligence support. It was considered too risky. Now TF 58 had no other choice but to reach back for this support. … The process sprouted out of simple trust. Marines trust other Marines. They trust each other to understand the requirement and get the job done – right and on time. The intelligence Marines of TF 58 coordinated with the Marine intelligence liaison officers at Navy [sic] Forces Central Command and Marine Forces Central Command in order to voice their requirement to Central Command (CentCom). The Marines at CentCom knew of MCIA's capabilities and trusted them to do the work for TF 58. Every evening (Kabul time) representatives from each of these organizations would meet in a VTC to discuss TF 58's current and future intelligence requirements – some of which were due in less than 24 hours. This allowed the requesters and producers of intelligence to meet in a collaborative environment and coordinate face-to-face. Priorities and deadlines would be established, and organizations would be assigned tasks. MCIA, because of its dedicated team of topographic and imagery analysts working 24 hours a day, 7 days a week (24/7), received the lion's share of IPB [Intelligence Preparation of the Battlefield] studies to support future operations. Studies ordered by TF 58 and assigned to MCIA were routinely turned around in less than 18 hours. If a particularly large product (i.e., HLZ [Helicopter Landing Zones] studies) came in, more people were assigned to the task to ensure a turnaround in less than 24 hours. The sense of urgency was never lost. Despite the lack of dust, noise, smoke, and shrapnel, the Marines in the rear never lost sight of what was at stake."[37]

Brigadier General Ennis, obviously very proud of his organization and rightfully so, nevertheless captures the human challenges associated with reachback and provides a model for the mindset that must be pervasive for reachback to work effectively.

There is also another side of this story and that is the mindset of the commander in the theater. Brigadier General Mattis, an acknowledged innovator in his own right and a champion of what he calls "trust tactics," was the commander that Brigadier General Ennis needed at the receiving end of his activity's support.[38] The point is that the services will never be able to clearly define and mitigate the risks that go along with reachback if they don't have forward-looking commanders who are willing to trust each other and the capability. As such, the

services need commanders with the vision to accept and manage these risks in a way that allows the services to get to the future … Brigadier General Mattis did exactly that.

Another concern, this one expressed by British warfighters, is the impact that reachback could have on the initiative of field commanders. Their argument is a familiar one … if a rear area command and control activity is necessarily linked to the details of the forward-deployed commander, the inclination could tend toward micromanagement.[39] This possibility certainly exists. Despite an overall healthy environment for initiative, senior commanders will invariably feel compelled at times to provide added control and direction should they find it necessary … that is not necessarily bad. The goal must be a balance between latitude and direction. With what increasingly seems to be a positive move toward "mission type orders" by many senior commanders, it is likely that this concern over undue intrusiveness will not cause reachback to become an impediment to initiative. That said, this dynamic must be carefully monitored and assessed.

A final point on the human dimension previously discussed relative to Colonel Britten's work is the physical positioning of the commander and his immediate advisors. Reachback is not an "all or nothing proposition" nor should it be. There is no substitute for face-to-face leadership by commanders on the battlefield. History has proven over and over again that commanders inspire their forces through their presence on the battlefield … that presence represents the shared hardship and danger that binds a commander to those he leads.

This commander and principal staff member location issue becomes an equally important concern with respect to maintaining readiness and good working relationships with our allies. Following a recent joint and combined exercise, an allied senior general officer asked where certain US staff members were located throughout the exercise. When the answer revolved around reachback, the allied general officer pointed to the ground and said "you need to be here."[40] These cultural considerations require careful thought about potential ramifications of reachback when working with allies. The first question is not "for what and whom can we reach back ?" It should be "for what and whom should we reach back?"

There should be no illusions about the cultural and human challenges through which the warfighters will have to work regarding reachback. These challenges are real and they are not just about resistance to change. Warfighting is a human endeavor wrought with fog, friction, and certainly "Mr Murphy" himself. Warfighters must continue to identify the pitfalls, from a human and cultural perspective, and run them to ground just as they must do on the technical side with communications networks and the like.

TECHNICAL ISSUES

Many of the technical issues related to reachback are appropriately dealt with in the acquisition process by functional experts and acquisition and contracting professionals. While a detailed look at operational requirements documents and varying levels of architectures is beyond the scope of this paper, one needs to understand some of the highlights. In this regard, the reference is largely, but not exclusively, to electronic vice physical reachback capabilities.

As with any emerging capability in the combat development process, one must start with a clear definition of the requirement. This will likely be an iterative challenge with reachback as warfighters continue to define and develop various new functional applications for its use. In a highly-competitive funding environment, there is a limit to just how much excess capacity can be built into the communications infrastructure. "Build it and they will come" is typically not an approach that works well in an acquisition process that is tightly constrained fiscally and which in turn demands the articulation of well-defined requirements. As such, it will be important for the acquisition professionals to develop the Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) infrastructure in a scalable manner so that increasing functional applications can be accommodated as Pre-Planned Product Improvements (P3I) without having to go back to the drawing board on communications infrastructure.

The Navy and Marine Corps can, through their combat development processes, help drive this acquisition process by clearly establishing that reachback is an important, integral complement to seabasing and thus requires a full exploration of all functional areas to determine where it might be applicable. Logisticians, intelligence experts, command and control experts, and so forth must be comprehensively challenged to "peel the onion" to determine what activities within their functional areas lend themselves to reachback. Certainly the requirements derived from any such comprehensive assessment will evolve over time and vary with respect to their priority but we must start somewhere. As well, it is only through such an assessment that the planners of seabase platforms can fully start to understand the impact of reachback on the required capacity of the platforms for which they must plan, program, and budget.

A related issue is the absolute requirement to provide for the enduring warfighting requirement of redundancy … this is the key to trust. Redundancy does not necessarily mean, in the case of reachback, that the commander must bring to the theater a back-up staff reminiscent of the one he left behind to provide reachback support. It does mean, however, that the architectures developed for reachback must provide backup systems and options that ensure warfighters thousands of miles away are not cut off from vital support when primary

communication means fail for whatever reason. Reliability and redundancy will be critical keys to the success of reachback systems and they must be built in from the very beginning and rigorously tested.

On the other hand, processes and technologies that avoid overwhelming the supported commander with volumes of redundant information must go hand-in-hand with reliability and redundancy. A frequent complaint of warfighters in the Gulf War was the amount of time it took to sort through redundant intelligence and other related information from various sources to find the "nuggets" that might give them an edge. In this regard, the concept of "pull" vice "push" for reachback support may well be a partial answer to not inundating the commander and his staff. While competing information, particularly with intelligence assessments, is good, support agencies must find ways to ensure the information synthesis is completed and the redundancy reduced so they are sending the warfighter an asset and not an information "nightmare." And certainly, the value of such refinement processes goes beyond not overwhelming the forward-deployed commander and his staff with excessive information. These processes must also reduce the communications infrastructure needed and help ensure that systems don't get bogged down because they are being forced to run at or beyond their sustainable capacities.

Organizational issues are also emerging which bear consideration, as well. Although the location of the activity to which the warfighter reaches back theoretically should not matter, concerns over having activities too disparately located and controlled have apparently been raised. As discussed earlier, the Chief of Staff of the Air Force, General Ryan, approved the establishment of a permanent stateside operations support center to provide reachback support for future contingency operations and deployments.[41] Apparently, the Air Force has found some value in centralizing, where possible, the location of the supporting reachback activity. Major John Neal, in his look at reachback, states, "creating a reachback center may help properly manage information resources."[42] Neal sees the center operating 24 hours a day as it develops working relationships with national information sources, stays abreast of the commander's situation, and serves as the brain trust for where best to find the information and support the commander's needs.

This reachback center concept may well add enormous value as the volume of reachback applications increases and the number of nodes to which the forward-deployed commander reaches back expands beyond his own rear area operations center. The battlefield is a sufficiently confusing place that the forward-deployed commander and his staff should not have to keep track of a list of disparate reachback nodes. While the terminal nodes may be disparately located and controlled, the forward-deployed commander would likely be well-served

by having a place to go when things get confusing. In its infancy, a reachback center may not be an efficient use of resources and may be overly redundant with the commander's rear area operations center, but as reachback expands and matures, courses of action ranging from a physical reachback center to a virtual reachback center will merit increasing consideration. It will likely be, however, that a reachback center would function best if it was provided for by a higher headquarters activity within the supported unit's chain of command. Such an arrangement would preserve the integrity of command relationships.

FORCE PROTECTION

As discussed earlier, force protection is one of the inherent benefits of reachback. But as Sir Isaac Newton pointed out in his laws of physics, for every action there is an equal and opposite reaction. One would be well advised to assume that this dictum also applies to force protection actions. As warfighters transition to reaching back for critical warfighting capabilities, they necessarily remove targets from the distant battlefield and place them in their own backyard. As such, the need for more than merely cosmetic force protection measures must increase. One might assume that an appropriate starting point for protecting these home-based capabilities is to treat them as though they were in the distant theater. That may seem sufficient until one considers the psychological effect on the American people of having a capability attacked on their own soil vice in a distant theater. They hope and pray for neither to happen, but the impact of attacks on their own soil will almost certainly have a greater impact on the fear of US citizens than if the same attack occurred in a war zone. Accordingly, the diligent protection that should be afforded these reachback capabilities should account for these expected second order effects of any attack on them.

CONCLUSIONS

Reachback is not a new idea. For many years, warfighters in distant theaters have used various communication methods to exchange guidance and information with a higher headquarters or national command authority well removed from the battlefield. What is new is the degree to which the information revolution has allowed for the proliferation of reachback to many more functional areas for warfighters working at the tactical through the strategic level of war. This revolution has had an enormous effect on the capabilities and possibilities through which warfighters can successfully prosecute military campaigns. The operational concepts it has helped spawn are providing tactical, operational, and strategic advantages that the forefathers of warfare could hardly have dreamed possible. New ingredients have been added to warfare which have drastically altered the relative value of traditional warfighting ingredients.

As Secretary of the Navy Gordon R. England, recently stated, "Networked systems and sensors may be more important today than sheer numbers of weapons platforms."[43]

Reachback is being developed and used throughout the Navy and Marine Corps today. It has been proven on the modern battlefield during expeditionary operations, tested during a myriad of training exercises, and articulated as an enabling capability that will support new tactics, techniques, and procedures. While some are still pessimistic about its potential, many more fully recognize that it is the way of the future and are getting on with identifying its potential applications and working through the growing pains of implementing this capability to their advantage. The concern raised in this paper, however, is with the lack of stature reachback has received in the Navy and Marine Corps' conceptual documents. While seabasing is a prominent and well-articulated enabling capability to NEMW, reachback is conspicuous in its absence. This is interesting inasmuch as warfighters are actually using reachback today whereas the plans for networked ships in a seabase are still on the drawing board. It is even more interesting when one realizes that the information technology and communications infrastructure to make reachback work are in place, improving, and being used by warfighters to support their warfighting requirements.

Concepts are forward-looking constructs that should help focus warfighters on the programs that must prevail in the combat development and acquisition processes. Where promising concepts lead, combat development and acquisition efforts should follow. The evidence clearly indicates both in and out of the Navy and the Marine Corps that one cannot advance seabasing as an important supporting concept to NEMW without also articulating the complementary value of reachback. In the next version and/or edition of the Marine Corps' capstone document, "Expeditionary Maneuver Warfare," as well as in its annual document entitled United States Marine Corps Concepts & Programs, the heading of "Seabasing" should give way to "Seabasing and Reachback" with appropriate discussion given to their important complementary nature.

Reachback is not only here to stay, it is growing rapidly in its importance to warfighters and the network centric approach to modern warfare. In this paper, the transformational concept of NEMW has been explored along with its supporting concepts of OMFTS, STOM, and seabasing with a conclusion being reached that some capabilities need not even come to the fight to have their intended effects applied on the battlefield. The strategic advantages of reachback in the areas of mobility constraints, budgetary maneuvering, diplomatic and host nation support negotiations, overall national power, and force protection were also explored. In each of these strategic areas, reachback has significant promise that could actually exceed its

notable tactical and operational advantages. Within each battle space function a small sampling of reachback applications was explored in contexts ranging from use in real-world conflicts, to experimentation, to "drawing board" efforts. Admittedly, the literature is emerging and to date has been almost exclusively about the successes and promises of reachback. One cannot simply assume that failures have not occurred. These failures must be written about so that we proceed on a balanced playing field that allows us to develop robust processes and technologies for reachback. A number of admonitions were explored, however, that must be carefully considered as the development of reachback capabilities continues. Zealots for reachback must not conveniently place the concerns and skepticism of those playing devil's advocate into the "resistance to change" category and move on. The Navy and Marine Corps have been enormously successful with their self-reliant, organic resource, innovative mindset and any movement away from that mindset, no matter how small, must be done with caution, forethought, ample experimentation, and trust. However, complementing the advantages of seabasing with the added value of reachback can exponentially increase the efficiency and effectiveness of our forces in support of national objectives.

WORD COUNT = 11,941

ENDNOTES

[1] United States Marine Corps, United States Marine Corps Concepts & Programs 2002, (Washington, D.C.: United States Marine Corps, not dated), 17.

[2] United States Marine Corps, "Expeditionary Maneuver Warfare: Marine Corps Capstone Concept," not dated; available from <http://www.doctrine.usmc.mil/emw/emwtext.doc+seabasing&hl=en&ie=UTF>; Internet; accessed 23 October 2002. The authoritative document on seabasing is this capstone concept document … the publication entitled United States Marine Corps Concepts & Programs is a more widely distributed, glossy document that provides an overview of a wide variety of Marine Corps concepts and programs for a diverse audience.

[3] Katherine McIntire Peters, "Army Chief Says Logistics Reform is Vital," 4 September 2002; available from <http://www.govexec.com/dailyfed/0902/090402kp1.htm>; Internet; accessed 6 September 2002.

[4] Scott Trout <war_room@hqmc.usmc.mil>, "War Room Report 33-02," electronic mail message to Jeffery Peterson <jeffery.peterson@carlisle.army.mil>, 23 August 2002.

[5] James L. Jones, "Statement of General James L. Jones Commandant of the United States Marine Corps Before the Senate Armed Services Committee on September 27, 2000 Concerning Readiness," speech to the Senate Armed Services Committee, 27 September 2000; available from <www.senate.gov/~armed_services/statemnt/2000/000927jj.pdf>; Internet; accessed 23 October 2002. This statement before the SASC is but one in a long litany of Navy and Marine Corps communications about the Marine Corps' documented amphibious lift requirement of 3.0 MEBs.

[6] Scott M. Britten, Reachback Operations for Air Campaign Planning and Execution, Air War College Research Paper (Maxwell Air Force Base: U.S. Air War College, April 1997), 33, 38.

[7] Ibid., 16-17.

[8] Ibid., 52. The Navy reports that it is planning to replace its four existing command and control ships with JCC (X) platforms starting in the 2010 timeframe.

[9] George Bush, The National Security Strategy of the United States of America (Washington, D.C.: The White House, 17 September 2002), 29-30.

[10] Trout. This latest email in the form of a Marine Corps War Room report confirms a long list of Navy and Marine Corps speeches and documents that confirm 3.0 MEBs as the Marine Corps' amphibious lift requirement.

[11] Charles C. Krulak, "Preparing for the 21st Century," speech to the Armed Forces Communications and Electronics Association and the U.S. Naval Institute West '98, 16 January 1998; available from <www.usmc.mil>MarineLINK>The Commandant's Page>Speeches Testimony>Preparing for the 21st Century>; Internet; accessed 23 August 2002.

[12] A. J. Bosker, "AF Relies on Reachback Capabilities," 23 January 2001; available from <http://www.af.mil/news/Jan2002/n20020123_0111.shtml>; Internet; accessed 23 August 2002.

[13] Ibid.

[14] Donald E. Neuchterlein, "Defining U.S. National Interests: An Analytical Framework," in America Overcommitted: United States Interests in the 1980's (Lexington, Kentucky: University of Kentucky Press, 1985), 24-26.

[15] James Oman of Carlisle Barracks, interview by author, 11 September 2002, Carlisle, PA.

[16] Commandant of the Marine Corps, "Commandants Guidance," ALMAR 023-99 (Washington, D.C.: United States Marine Corps, 2 July 1999).

[17] John A. Tirpak, "The Long Reach of On-Call Airpower," December 1998; available from <http://www.afa.org/magazine/1298airpower.html>; Internet; accessed August 2002.

[18] Air Force News, "Air Force Approves JEFX '99 Results," 15 February 2000; available from <http://www.af.mil/news/Feb2000/n20000215_000218.html>; Internet; accessed 4 September 2002.

[19] John R. Thomas, "Transforming Marine Corps C4," August 2002; available from <http://www.mca-marines.org/Gazette/0802Thomas.html>; Internet; accessed 4 September 2002. This host of technological improvements include lightweight multiband satellite terminals (LMST), extremely high-frequency (EHF)-based secure mobile antijam reliable tactical terminals, and terrestrial multichannel systems such as the AN/TRC-170 and the AN/MRC-142 radios.

[20] Global Security Org, "B-2 Operations," not dated; available from <http://www.globalsecurity.org/wmd/systems/b-2-ops.htm>; Internet; accessed 4 September 2002.

[21] Ibid.

[22] Tirpak.

[23] Michael E. Ennis, "A New Operating Environment," August 2002; available from <http://www.mca-marines.org/Gazette/0802Ennis.html>; Internet; accessed 23 August 2002.

[24] Ibid.

[25] Richard J. Newman, "Reachback," Air Force Magazine Online June 2000 [journal on-line]; available from <http://www.afa.org.magazine/June2000/0600reach.html>; Internet; accessed 4 September 2002.

[26] United States Marine Corps, "Quadrant Model," not dated; available from <http://www.hqmc.usmc.mil/LPI.nsf>; Internet; accessed 4 September 2002.

[27] Scott M. Ballard, "Maritime Prepositioning Force Future (MPF(F)): The Future of Sea-Based Aviation Logistics," not dated; available from <http://hqinet001.hqmc.usmc.mil/avn/AS/ASL/malps/malps_seabased_log.htm>; Internet ; accessed 3 September 2002.

[28] United States Army War College Department of Military Strategy, Planning and Operations, The First Year: U. S. Army Forces Central Command during Operation Enduring Freedom, draft case study, 10 October 2002, 23.

[29] Jennifer Thompson, "Pacific Warrior Medics Put 7 New AF Technologies to Test," 2001; available from <http://www2.hickam.af.mil/newsarchive/2001/2001024.htm>; Internet; accessed on 23 August 2002.

[30] Jane M. Sanders, "The First Response," not dated; available from <http://www.emsmagazine.com/issues/article0005.html>; Internet; accessed 8 August 2002.

[31] As the Branch Head for the Total Force Administration System Branch within the Manpower and Reserve Affairs Department at Headquarters, U.S. Marine Corps in Quantico, VA from June 1999 to May 2000, the author was routinely involved in the monitoring and review of the results of these I MEF experiments. In part, the results of these experiments -- if that is what they could be called -- helped form a good deal of the end state for the revised service model for the Marine Corps for pay and personnel administration services of which the author was the primary drafter.

[32] United States Marine Corps, "A Concept for Operations in a Riverine Environment," 12 February 1998; available from <http://192.156.75.102/riverine.htm>; Internet; accessed 8 August 2002.

[33] Arthur P. Brill Jr, "A Tremendous Pool of Talent MFR is 'Ready, Willing, and Able'," February 2002; available from <http://www.seapowermagazine.org/feb_2002/35_brill.htm>; Internet; accessed 8 August 2002.

[34] United States Marine Corps, United States Marine Corps Concepts & Programs 2002, 6-7.

[35] Commandant of the Marine Corps.

[36] John M. Neal, "A Look at Reachback," Military Review 80/5 (Sep/Oct 2000): [database on line]; available from ProQuest; accessed 23 August 2002.

[37] Ennis.

[38] Having worked with Brigadier General Mattis once and directly for him another time, the author is personally familiar with his emphasis on "trust tactics." While the author has no reason to believe Brigadier General Mattis coined the phrase, the phrase was a part of his daily dialogue and deeply representative of his leadership style and risk management philosophy.

[39] Rupert Pengelley, "Mixed Messages on Reachback," not dated; available from <http://kgbmil.dk/Tilvaekst/artikler2002-04.htm>; Internet; accessed 23 August 2002.

[40] This quote is subject to the Army War College non-attribution policy; however, the author has received permission from its source to use it without attribution in this paper.

[41] Air Force News.

[42] Neal.

[43] Thomas.

BIBLIOGRAPHY

Air Force News. "Air Force Approves JEFX '99 Results." 15 February 2000. Available from <http://www.af.mil/news/Feb2000/n20000215_000218.html>. Internet. Accessed 4 September 2002.

Ballard, Scott M. "Maritime Prepositioning Force Future (MPF(F)): The Future of Sea-Based Aviation Logistics." Not dated. Available from <http://hqinet001.hqmc.usmc.mil/avn/AS/ASL/malps/malps_seabased_log.htm>. Internet. Accessed 3 September 2002.

Bosker, A. J. "AF Relies on Reachback Capabilities." 23 January 2001. Available from <http://www.af.mil/news/Jan2002/n20020123_0111.shtml>. Internet. Accessed 23 August 2002.

Brill Jr, Arthur P. "A Tremendous Pool of Talent MFR is 'Ready, Willing, and Able'." February 2002. Available from <http://seapowermagazine.org/feb_2002/35_brill.htm>. Internet. Accessed 8 August 2002.

Britten, Scott M. Reachback Operations for Air Campaign Planning and Execution. Air War College Research Paper. Maxwell Air Force Base: U.S. Air War College, April 1997.

Bush, George. The National Security Strategy of the United States of America. Washington, D.C.: The White House, 17 September 2002.

Commandant of the Marine Corps. Commandant's Guidance. ALMAR 023-99. Washington, D.C.: United States Marine Corps, 2 July 1999.

Davis, Mark S. "An Alternate AOC JFACC Course." Not dated. Available from <http://www.przeglad-wlop.pl/przeglad/archiwum/a_p_20/davisa.htm>. Internet. Accessed 8 August 2002.

Ennis, Michael E. "A New Operating Environment." August 2002. Available from <http://www.mca-marines.org/Gazette/0802Ennis.html>. Internet. Accessed 23 August 2002.

Global Security Org. "B-2 Operations." Not dated. Available from <http://www.globalsecurity.org/wmd/systems/b-2-ops.htm>. Internet. Accessed 4 September 2002.

Jones, James L. "Statement of General James L. Jones Commandant of the United States Marine Corps Before the Senate Armed Services Committee on September 27, 2000 Concerning Readiness." Speech to the Senate Armed Services Committee, 27 September 2000; available from <www.senate.gov/~armed_services/statemnt/2000/000927jj.pdf>. Internet. Accessed 23 October 2002.

Krulak, Charles C. "Preparing for the 21st Century." Speech to the Armed Forces Communications and Electronics Association and the U.S. Naval Institute West '98. 16 January 1998. Available from <www.usmc.mil>MarineLINK>The Commandant's Page>Speeches Testimony>Preparing for the 21st Century>. Internet. Accessed 23 August 2002.

Neal, John M. "A Look at Reachback." Military Review 80/5 (Sep/Oct 2000): 39-43. Database on line. Available from ProQuest. Accessed 23 August 2002.

Neuchterlein, Donald E. "Defining U.S. National Interests: An Analytical Framework." In America Overcommitted: United States Interests in the 1980's. Lexington, Kentucky: University of Kentucky Press, 1985.

Newman, Richard J. "Reachback." Air Force Magazine Online June 2000. Journal on-line. Available from <http://www.afa.org.magazine/June2000/0600reach.html>. Internet. Accessed 4 September 2002.

Oman, James, former ARCENT Brigade Commander in Saudi Arabia. Interview by author, 11 September 2002, Carlisle, PA.

Pengelley, Rupert. "Mixed Messages on Reachback." Not dated. Available from <http://kgbmil.dk/Tilvaekst/artikler2002-04.htm>. Internet. Accessed 23 August 2002.

Peters, Katherine McIntire. "Army Chief Says Logistics Reform is Vital." 4 September 2002. Available from<http://www.govexec.com/dailyfed/0902/090402kp1.htm>. Internet. Accessed 6 September 2002.

Sanders, Jane M. "The First Response." Not dated. Available from <http://www.emsmagazine.com/issues/article0005.html>. Internet. Accessed 8 August 2002.

Thomas, John R. "Transforming Marine Corps C4." August 2002. Available from <http://www.mca-marines.org/Gazette/0802Thomas.html>. Internet. Accessed 4 September 2002.

Thompson, Jennifer. "Pacific Warrior Medics Put 7 New AF Technologies to Test." 2001. Available from <http://www2.hickam.af.mil/newsarchive/2001/2001024.htm>. Internet. Accessed 23 August 2002.

Tirpak, John A. "The Long Reach of On-Call Airpower." December 1998. Available from <http://www.afa.org/magazine/1298airpower.html>. Internet. Accessed 23 August 2002.

Trout, Scott, <war_room@hqmc.usmc.mil>. "War Room Report 33-02." Electronic mail message to Jeffery Peterson <jeffery.peterson@carlisle.army.mil>. 23 August 2002.

Trout, Scott, <war_room@hqmc.usmc.mil>. "War Room Report 35-02." Electronic mail message to Jeffery Peterson <jeffery.peterson@carlisle.army.mil>. 6 September 2002.

United States Army War College Department of Military Strategy, Planning and Operations. The First Year: U. S. Army Forces Central Command during Operation Enduring Freedom. Draft Case Study. 10 October 2002.

United States Chemical School. White Paper Chemical Corps Telesupport Operations. Fort Leonard Wood, MO: U.S. Department of the Army, 21 September 2002.

United States Marine Corps. "A Concept for Operations in a Riverine Environment." 12 February 1998. Available from <http://192.156.75.102/riverine.htm>. Internet. Accessed 8 August 2002.

United States Marine Corps. "Expeditionary Maneuver Warfare: Marine Corps Capstone Concept." Not Dated. Available from <http://www.doctrine.usmc.mil/emw/emwtest.doc+seabasing&hl=en&ie=UTF>. Internet. Accessed 23 October 2002.

United States Marine Corps. "Quadrant Model." Not dated. Available from <http://www.hqmc.usmc.mil/LPI.nsf>. Internet. Accessed 4 September 2002.

United States Marine Corps. United States Marine Corps Concepts & Programs 2002. Washington, D.C.: United States Marine Corps, Not dated.

United States Navy. Decisive Power … Global Reach: Naval Amphibious Warfare Plan. Washington, D.C.: United States Navy, Not dated.

Williams, Greg. "Army Reserve Military Intelligence a Sought After Commodity in the War on Terrorism." Not dated. Available from <http://www.army.mil/usar/news/2002/02february/seekingintelligence.html>. Internet. Accessed 4 September 2002.